

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See Form PCT/ISA/210 (sheet 2)**

Applicant's or agent's file reference
307036

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/EP2004/053336

International filing date (day/month/year)
08.12.2004

Priority date (day/month/year)
19.12.2003

International Patent Classification (IPC) or both national classification and IPC
F01 N3/20, F01 N3/029, F01N11/00

Applicant
ROBERT BOSCH GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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International application No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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International application No.
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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	2, 4, 5	YES
	Claims	1, 3, 6-10	NO
Inventive step (IS)	Claims	2, 4	YES
	Claims	1, 3, 5-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO
2. Citations and explanations:			
1. <u>Clarity</u>			
1.1. <u>Claim 1</u>			
<p>The phrase "<i>measurement for the quantity of throughflow</i>" in claim 1 (lines 16-17) is vague and unclear and leaves the reader uncertain as to the meaning of the technical feature in question: it is not clearly apparent that a "<i>predetermined throughflow rate is set</i>" during the "<i>diagnosis</i>", although this is essential to the definition of the invention.</p> <p>Since independent claim 1 does not contain this feature, it does not meet the requirement of PCT Article 6 in conjunction with PCT Rule 6.3(b) that each independent claim must include all the technical features essential to the definition of the invention.</p>			
1.2. <u>Claim 10</u>			
<p>Device claim 10 does not contain any structural features of the claimed device and cannot therefore be considered to be clear (see also Guidelines S-07/1998 part IV, III-4.8).</p>			

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

2. Reference is made to the following documents:

D1: US-B-6209315

D2: US-A-5709080

3. Claim 1

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2).

3.1. Document D1 discloses (the references between parentheses refer to this document):

A method for operating a metering valve (14) which determines a throughflow rate (throughput) of a reagent (reducing agent) which is to be fed into an exhaust gas region of an internal combustion engine: see column 4, lines 1 to 23; claim 1; figure 1 and associated text.

Furthermore, this document also discloses that *provision is made to diagnose the metering valve (14), providing an evaluation of a measurement for the amount of throughflow during the diagnosis time (particular time): see column 6, line 55 to column 7, line 10.*

3.2. All the features of claim 1 are likewise known from D2: see column 3, lines 6 to 23.

3.3. Comment

According to section 1.2., all the features of claim 10 are likewise known from D1 and D2.

4. Dependent claims 2 to 9.

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Box No. V	Reasoned statement under Rule 43bis 1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<p>4.1. The features of claims 3, 6 to 9 are likewise known from document D1 and the subject matter thereof is therefore not novel either (see section 3.1).</p> <p>4.2. The features of claims 2 and 4 are neither known nor suggested.</p> <p>4.3. <u>Claim 5</u></p> <p>The features of this claim are concerned with structural details which do not go beyond the general knowledge of a person skilled in the art and which a person skilled in the art would apply according to the circumstances.</p> <p>5. The subject matter of the invention contained in claims 1 to 10 is quite obviously industrially applicable and therefore meets the requirements of PCT Article 33(4).</p>	